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THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States,
issued on the first of each month from April to November, inclusive.

Volume 5

November 1, 1925

Number 8

BUREAU OF ENTOMOLOGY
UNITED STATES
DEPARTMENT OF AGRICULTURE
AND
THE STATE ENTOMOLOGICAL
AGENCIES COOPERATING

OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR OCTOBER, 1925

The month has shown as usual the rapid decline in insect depredations over the Northern States.

This number of the Bulletin contains the final summary of the Hessian-fly situation in Nebraska, Illinois, and Kansas. The fall brood of the fly seems generally to be larger than usual. On the other hand, the false wireworms on winter wheat in the Western States are decidedly less prevalent.

The localized colony of the Anomala (Anomala orientalis Waterh.) in Connecticut is still flourishing. One of the most surprising features is the very slight general interest of entomologists throughout the country in the presence of this most serious pest in the United States.

Growers in the southern part of the Eastern-Shore district of Maryland and Virginia are suffering an almost complete loss of the late potato crop, due to the work of the potato tuber moth.

In Texas and southern California the boll worm seems to be even more troublesome than usual, both as a corn and as a cotton pest.

The season as a whole has been normal from an entomological point of view. No widespread serious grasshopper outbreaks developed despite the threatening conditions reported in the early part of the season. The Hessian fly, as a whole, was not so serious as usual though Kansas suffered very seriously from infestation by this pest.

In May, June, and July a very widespread and serious outbreak of cutworms took place, extending over practically the entire region east of the 100th meridian and also along the Pacific Coast. Despite the unusually early appearance of the cotton leaf worm but little general damage was done by this pest and in many sections it is even proving beneficial in hastening the maturing of late bolls.

Except for the localized outbreaks in the Delta sections of Mississippi and Louisiana ^{the} chinch bug was not serious.

During the season the Mexican bean beetle very materially increased its range. It is now known to occur over the greater part of West Virginia, southwestern Pennsylvania, southern Indiana, and practically all of Ohio, with very little extension of territory to the south and west.

The boll weevil infestation as a whole was subnormal.

The codling moth was generally more prevalent than during the last three years in the East-Central States; on the other hand the plum curculio was below normal in the Georgia fruit belt.

The Oriental peach moth has advanced its range of serious abundance southeastward to the Sandhill section of North Carolina and southwestward to the Birmingham section of Alabama.

The Gipsy-moth situation was generally favorable except in the Cape Cod section of Massachusetts, and the New Jersey center was less serious than at any time since the discovery of this pest in the State. The brown-tail moth remains about the same as last year but the satin moth has greatly spread during the past season. The pest now extends to Warren, Me., and Moultonborough, N. H., westward to Wilton and Mason, N. H., and Worcester, Mass., and southward to the eastern third of Rhode Island.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR OCTOBER, 1925

In nearly all parts of the Dominion of Canada unseasonably cold weather has prevailed throughout the month, accompanied by much rains and snow, and consequently few reports of insect activity have been received.

The European corn borer has been found in 25 additional townships in Ontario, in 1925 - in the territory north of Toronto, and east along the St. Lawrence River, in Simcoe, Hastings, Frontenac, Lennox, Addington and Leeds Counties.

The western wheat-stem sawfly is parasitized by Microbracon cephi Boh., to the extent of 22 per cent in the Treesbank district, Manitoba.

The pine shoot moth, Rhyacionia buoliana Schiff., has been found at six different points in Ontario. It is supposed to have been originally imported from Europe and, in one case, possibly from the United States.

The forest tent caterpillar infestation in Saskatchewan this year occurred in the wooded areas in the Qu'Appelle River valley extending through tributary coulees into the surrounding districts. The most severe outbreaks occurred in the vicinity of Bulyea and along the shores of Long Lake. The general trend of the infestation is in a northerly direction with a marked decrease in southern districts. A severe outbreak in the eastern section of the Qu'Appelle Valley is anticipated in 1926, with less severe infestations in the western end. In Manitoba, a new outbreak occurred this year from south of Crow Wreck Lake to Hampry Falls on the Winnipeg River.

Recent reports indicate that the codling moth caused much midworm injury in apple orchards of the Niagara district, Ontario.

Grape leafhoppers have experienced conditions favorable to their rapid increase in the Niagara district, Ontario, and they are expected to go into winter quarters in large numbers, in some sections.

GENERAL FEEDERS

GRASSHOPPERS (Acridiidae)

- Florida F. S. Chamberlin (October 8): Grasshoppers are rather abundant at Quincy at the present time. Some damage is being done to young beans and other truck crops.
- Nebraska M. H. Swenk (September 25 to October 25): During the last week in September grasshoppers were reported from York County as injuring young alfalfa fields around the edges.

WIREWORMS (Elateridae)

- California Roy E. Campbell (September 23): Cauliflower plants set out early in August at El Monte soon showed evidence of damage by wireworms (Pheletes californicus). Counts of dead plants made on this date show the damage to vary from 8 to 42 per cent, with an average for the field of 20 per cent. In addition many plants were stunted by the attack, but not killed.

CEREAL AND FORAGE CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

- Illinois W. P. Flint (October 19): The emergence of the fall brood of the fly, reported as starting on September 18 in the last issue of the Crop Pest Survey, continued in about the normal manner, emergence being practically over at Urbana by October 4 or 5, and very few flies coming out after September 28. Data gathered in other parts of the State show the emergence to be normal so far as time of emergence is concerned, but that the fall brood was unusually heavy. All early-sown and volunteer wheat is practically 100 per cent infested. Some of the wheat on which eggs were first found on September 18 now have the fly in the flaxseed stage. Wet weather and almost daily rains starting about the recommended date for wheat seeding have delayed the seeding so that some wheat will be sown rather late.
- Nebraska M. H. Swenk (October 3): The following table gives the complete counts at stations Nos. 1 and 2 up to October 1 and 2, respectively. These records are a continuation of the records appearing in the last number of the Survey Bulletin. Station No. 1, at Millard, was discontinued on October 1.

Date	Station	Number of puparia: per 100 stubble	Number of flies: emerged	Number of eggs laid on 100 plants
Sept. 26	1	531	42	27
27	1	282	131	68
27	2	392	232	1012
28	1	442	37	219
28	2	354	186	373
29	1	305	0	17
29	2	308	77	64
30	1	441	-	0
30	2	424	58	3
Oct. 1	1	345	-	2
1	2	546	6	0
2	2	448	18	0

Kansas

J. W. McColloch (October 23): We still have plenty of the Hessian fly with us, and present indications are that this insect will cause considerable damage to the 1926 wheat crop. The principal trouble seems to be located in the central and western counties of the State, although the fly is present in all parts, except a few of the south-western counties. Early-sown wheat throughout the State now contains flaxseeds. In McPherson County many early-sown fields have been plowed up because of fly damage. Wheat received from Lane County two weeks ago contained a large number of flaxseeds, and this record extends the western spread of the insect to some extent.

FALSE WIREWORM (Eleodes opaca Say)

Nebraska

M. H. Swenk (September 25 to October 25): Only one serious report of injury to newly-seeded wheat by the plains false wireworm was received this fall. That was from Frontier County and involved the practical ruination of 200 acres of wheat.

WHEAT ROOT APHIDS (Geocica squamosa Hart and Forda olivacea Rohwer)

Nebraska

M. H. Swenk (September 25 to October 25): The wheat root aphids were reported as attacking young wheat in Kearney County.

SIX-SPOTTED LEAFHOPPER (Cicadula semnotata Fab.)

Nebraska

M. H. Swenk (September 25 to October 25): During the first week in October the six-spotted leafhopper was reported as very numerous in the young wheat fields around Mason, Custer County, though not doing any great amount of injury.

CORN

CHINCH BUG (Blissus leucopterus Say)

Nebraska

M. H. Swenk (September 25 to October 25): Additional information obtained since my last report of September 25 confirms the statement there made that the chinch bugs are going into hibernation in south-eastern Nebraska in larger numbers than they did a year ago.

CORN EAR WORM (Heliothis obsoleta Fab.)

New York Rodney Cecil through J. E. Graf (September 13): While collecting corn ear worms for hibernation at Geneva from 2 bushels of corn (Golden Bantam) we found practically every ear infested with from 1 to 3 larvae.

Indiana J. J. Davis (October 28): More abundant than usual, damaging late sweet corn and affecting field corn throughout the State.

ALFALFA

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli Guen.)

Illinois W. P. Flint (October 19): Moderate flights of this insect occurred in central Illinois during September and caterpillars are now present in such numbers in some sections in southern Illinois as to cause damage to alfalfa and clover.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

Indiana J. J. Davis (October 28): Armyworms were reported doing considerable damage to alfalfa and sweet clover at Rockport, October 8. Possibly fall armyworm but was unable to get specimens for positive identification.

GRASS

ANOMALA (Anomala orientalis Waterh.)

Connecticut W. E. Britton (October 24): Many complaints have been received from owners at New Haven and many injured lawns observed but all are in the same section where the insect was first found here. They are more abundant than ever before.

F R U I T I N S E C T S

APPLE

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

Arizona Arizona News Letter, Vol. 3, No. 9 (September 30): The woolly aphid was reported as being serious by a correspondent who manages a commercial apple orchard near Prescott.

CODLING MOTH (Carpocapsa pomonella L.)

Massachusetts A. I. Bourne (October 22): A considerable amount of side-worm injury by the codling moth has been showing up for the most part in the eastern part of the State. This appeared, as near as I can determine at this time, mainly in August, which would lead us to suppose that it was due to the activities of the second-brood larvae.

APPLE AND THORN SKELETONIZER (Hemerothila pariana Clerck)

Massachusetts

A. I. Bourne (October 22): As stated in my last report, the apple and thorn skeletonizer showed a very marked increase in the brood which normally appears in this State around September. This caused a considerable amount of leaf skeletonizing in some orchards. It should be stated, however, that our best growers are finding this insect so easily controlled by their regular spray schedule that they are not ranking it as a serious pest.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Massachusetts

A. I. Bourne (October 22): I want to emphasize again the statement I made in my report of last month about the very general and considerable injury which has been caused throughout the main apple-growing sections of the State by the railroad worm. Of the principal varieties grown in this State, the Wealthy, was naturally hit the hardest. In one orchard which I visited the grower estimated that from 20 to 30 per cent of his supposedly marketable stock was found to be infested; practically 100 per cent naturally of his drops showed infestation. The trouble was so widespread and so serious that many growers found the market was rather suspicious of Wealthies. The McIntosh did not seem to be badly hit, although in some cases some injury was noted. I find that some of the growers are finding railroad worm work showing up in their Baldwins, which are being harvested at this time (October 15).

Nebraska

M. H. Swenk (September 25 to October 25): A new center of infestation of apples with the apple maggot in southern Cass County was brought to our attention about the middle of October.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Indiana

J. J. Davis (October 23): Continues as the major orchard problem in southern Indiana. This year it is much more abundant and destructive throughout central Indiana.

Illinois

W. P. Flint (October 19): Recent examination of peach and apple orchards in southern Illinois by S. C. Chandler has shown an increase in scale in orchards where the pest was not brought thoroughly under control last spring. In some cases trees are infested and a determined effort will have to be made to control the insect this winter. For the most part the scale is well under control. Practically all orchards in this section of the State will be sprayed with oil emulsion again this year. This applies to both peach and apple.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Massachusetts A. I. Bourne (October 22): Indications now are that there has been considerable increase in the European red mite in very many orchards. This is based on the approximate amount of overwintering eggs which have been deposited and can be readily detected in the orchards at this time.

DOCK FALSE WORM (Ametastegia alabrata Fall.)

Massachusetts A. I. Bourne (October 22): An interesting report came to us about the middle of the month from an orchard just below us in South Amherst, where a grower was finding a considerable amount of typical injury caused by the so-called dock false worm. This injury was noted principally on the Baldwin. The latest estimate which I have heard from this grower places this typical injury up to about 20 per cent of the crop thus far harvested. This is rather interesting to us because it is practically the first time this has been reported to us as occurring in any abundance.

PEACH

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia O. I. Snapp (October 15): Numerous reports have been received at the laboratory at Fort Valley from all over the peach belt in regard to the rapid increase of the San Jose scale during the past year. The increase is apparently just as great in orchards that were treated by lubricating-oil emulsion as in those where liquid lime-sulphur was used. (October 21): The marked increase in the San Jose scale in Georgia peach orchards is in all probability due to the very hot and dry August and September. These conditions appear to favor rapid scale reproduction. The increase has been so rapid in some orchards that the vitality of the trees was being materially lowered, and in order to check the drain on the trees some growers had to use a 2 per cent lubricating-oil emulsion before the trees defoliated.

ORIENTAL PEACH MOTH (Laspeyresia molesta Busck)

Georgia O. I. Snapp and assistants (October 15): Seven generations of the Oriental peach moth have been reared in the insectary at Fort Valley this year.

Alabama N. F. Howard (October 13): Abundant enough on 11 young peach trees to be noticeable to the owner, who brought specimens to the laboratory. It has been comparatively scarce heretofore.

PEACH TREE BORER (Aegeria exitiosa Say)

Georgia

O. I. Snapp (October 15): Most of the Georgia peach growers are again using paradichlorobenzene for peach borer control. Some few are foregoing the treatment this year after having procured very high control by the use of the material for three consecutive years.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Georgia

O. I. Snapp (October 15): As usual this insect is at work in unhealthy peach trees at Fort Valley.

STRIPED TREE CRICKET (Oecanthus nigricornis Walk.)

Indiana

J. J. Davis (October 28): Egg punctures abundant in peach twigs received October 6 from New Haven.

PLUM

RED-HUMPED CATERPILLAR (Schizara concinna S. & A.)

California

T. D. Urbahn (September 26): The late generation was reported very destructive to young trees and defoliating older trees at Auburn.

E. E. Welty (September 29): Worked over about 80 acres at Tuttle, completely defoliating many trees. Lead arsenate spray proved ineffective. Time August 1 to October 1.

GRAPE

GRAPE LEAF SKELETONIZER (Harrisina americana Guer.)

Arizona

Arizona News Letter, Vol. 3, No. 9 (September 30): The grape leaf skeletonizer was again reported in a vineyard near Camelback Mountain. A spraying with lead arsenate was resorted to by the grower to check the insects.

DATE PALM

PARLATORIA DATE SCALE (Parlatoria blanchardi Targ.)

Arizona

Arizona News Letter, Vol. 3, No. 9 (September 30): The date palm inspector reports as follows: "During the month of September the Tempe Date Garden was inspected for Parlatoria scale with negative results. This garden still shows a clean slate and we are hoping the insects have been eradicated in this planting. The Carpenter planting near Camelback, in the Arcadia district, is apparently free from Parlatoria. Mr. Carpenter has 13 of the 15 shoots that were removed from the Tempe Date Garden in the spring of 1924. So far all the palms planted in 1925 are growing.

Mr. McWay's planting checks clean with no loss of shoots. Stapley's planting of 68 palms (34 from Cook's Nursery at Yuma) check clean with no loss. The Heard planting is in fine shape, clean and no loss this year. The palms on the Carl Hayden lot in Phoenix are still alive but too deeply planted. The Mesa Experimental Station has 42 palms in permanent planting and but 17 shoots left in the nursery; these palms are apparently clean.

Mr. Otto, near Mesa, has 9 palms on his planting, all in Johnson grass and all too deeply planted. Mr. Metzler's planting is in better condition than ever before; the ground is clean and his loss this year is very small, less than $2\frac{1}{2}$ per cent. The Bumstead garden is as usual in fine condition. No *Parlatoria* scale observed during September."

TRUCK - CROP INSECTS

POTATO AND TOMATO

POTATO TUBER MOTH (*Phthorimaea operculella* Zell.)

Maryland

E. N. Cory (September 15): The late crop of potatoes will be almost a total loss in lower Worcester and Somerset Counties. Early crop not damaged. Some fields plowed down. Tops on others entirely destroyed; all fields injured.

CABBAGE

TURNIP AFID (*Rhopalosiphum pseudobrassicae* Davis)

Virginia

Herbert Spencer (August 28): The false cabbage louse has put in an appearance in the plantings of kale. In some spots it is abundant enough to cause severe damage by stunting the young plants.

IMPORTED CABBAGE WORM (*Pieris rapae* L.)

Massachusetts

A. I. Bourne (October 22): There has been a considerable amount of late work of the cabbage worms by the larvae of both the imported cabbage worm and of the cabbage looper. Mr. Whitcomb, of the Market Garden Field Station at Waltham, reported the proportional abundance of the species at about 50:50. Here at the College there was an overwhelming proportion of the loopers to the larvae of the imported cabbage worm.

SOUTHERN CABBAGE WORM (*Pieris protodice* Boisd.)

Alabama

N. F. Howard (October 1-9): Serious outbreak on fall "greens" in this section. Strangely enough the common *Pontia rapae* is not very abundant.

CABBAGE LOOPER (Autographa brassicae Riley)

Massachusetts A. I. Bourne (October 22): There has been a considerable amount of late work of the cabbage worms by the larvae of both the imported cabbage worm and of the cabbage looper. Mr. Whitcomb, of the Market Garden Field Station at Waltham, reported the proportional abundance of the species at about 50:50. Here at the College there was an overwhelming proportion of the loopers to the larvae of the imported cabbage worm.

CABBAGE APHID (Brevicoryne brassicae L.)

California Roy E. Campbell (September 23): Cauliflower plants set out in August at El Monte were badly infested by the first of September, causing the stunting of many plants. The abundance of ladybirds, together with the use of nicotine dust, has now greatly reduced the infestation. An interesting observation is that several experimental plots were planted under an overhead sprinkler system and have been sprinkled about once a week since planting. These plots are practically free from aphids, while near-by fields planted in the open and irrigated in furrows are badly infested. The initial cost of a sprinkler system is high, but its use requires less water and less work, and in addition to stimulating good growth, may act as a check against the aphids.

CABBAGE WEEWORM (Heliothis undalis Fab.)

South Carolina W. J. Reid, Jr. (October 17): The cabbage weevil was found to be doing considerable damage to collards and young turnips in several gardens in the Piedmont section of the State. The greatest injury consisted in the feeding on the younger leaves and buds of the plants, but in quite a number of instances the larger larvae were found burrowing into the stems of the collards.

SQUASH

MELON WORM (Diaphania hyalinata L.)

Florida F. S. Chamberlin (October 8): Squash plants are rather heavily infested with the melon worm at the present time at Quincy.

SWEET POTATO

SWEET-POTATO WEEVIL (Cylas formicarius L.)

Texas O. G. Babcock (October 11): Sweet potatoes secured from the grocery were found to be badly mined by the larvae of the sweet-potato weevil. One specimen was reared. These sweet potatoes were brought in from San Antonio. It has been found later that infested sweet potatoes in Sonora stores are quite common.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

- North Carolina R. W. Leiby (October 27): Scouting for seasonal invasion by this insect which has just been completed shows spread of 10 miles eastward over last year on the southern edge of the State, and 50 miles eastward on the northern edge. Eight additional counties were invaded during the season of 1925. The entire part of the State west of the main line of the Southern Railway is now infested with the bean beetle.
- Indiana J. J. Davis (October 28): No reports or observations on further spread. The County Agent at Madison reports damage to soybeans near infested garden beans.

BEETS

HAWAIIAN BEET WEBWORM (Zinkenina (Hymenia) fascialis Cramor)

- Alabama N. F. Howard (October 15): A serious outbreak of the Hawaiian beet webworm occurred on spinach on several irrigated truck farms in the section about Birmingham on October 1. One grower suffered a loss of \$2,000. This pest is often serious on beets and Swiss chard earlier in the summer. On October 9 the moths were very abundant on one field of spinach ready for the market, but the younger crops, which had been sprayed as soon as the plants were well out of the ground, were free of moths and larvae.

SOUTHERN FIELD-CROP INSECTS

COTTON

BOLE WEEVIL (*Anthonomus grandis* Boh.)

GENERAL STATEMENT

B. R. Coad : In the northern and northwestern portions of Texas there was more than a normal rainfall; however, little injury was reported from these sections. In central Texas dry weather effected practically complete control of weevils. In the section along and near the coast considerable injury throughout the season was reported, weather conditions in this section being more favorable for the development of weevils.

In Oklahoma during the growing season weevils were held in check by dry weather and little damage reported, weevils not appearing in any considerable numbers until the general migration period.

In Arkansas boll weevil injury this season was relatively light in comparison with 1922 and 1923, but somewhat greater than in 1924. In the early part of the season infestations were local and injury was rare. Weevils became generally distributed after the middle of August and destroyed late forming squares and some young bolls. The season was an unusually dry one, except for a rainy period during the latter part of July.

In northern Louisiana, spotted infestations occurred with severe injury in many fields while in other fields little or no injury was reported. Injury as a whole was considered light. The weather conditions, except for a short period in July, were unfavorable for weevil multiplication. In Southern Louisiana weather conditions were more favorable for weevil development and a greater number emerged from hibernation in the spring causing severe injury in many local areas and generally much more injury than in the northern portion.

In Mississippi weevil injury throughout the State was reported as exceedingly light, the greater injury occurring in the Delta and northeastern sections. Weather conditions practically throughout the state have been unfavorable to weevil multiplication.

In the extreme western portions of Tennessee some weevil injury in local areas was reported. In the central and eastern portions practically no injury occurred due to extremely dry weather conditions.

In the northern portion of Alabama little weevil injury was reported. In the southern portion high infestations were reported in certain local areas with considerable injury. Injury generally was much greater than in the northern portion of the State.

The northern portion of Georgia experienced one of the driest seasons in its history, there having been no general rains after the first of April. Under these conditions the weevil caused very little damage and at the present time there are comparatively few weevils in the field. In the southern portion of the State weevils became abundant after the July rains, injury being spotted, light in some areas and severe in many.

In the Piedmont section of South Carolina reports indicated practically no injury by the weevil. In the Coastal Plain section an unusually large number of weevils emerged from hibernation and in fields near timber, etc., severe injury occurred from overwintered and first-brood weevils. During June and July weather conditions were favorable for weevil multiplication while in August conditions were very unfavorable due to lack of rain. Excessive shedding occurred in large areas during August. In general, weevil injury has been heavy and much greater than in 1924.

In the eastern and southern portions of North Carolina weevils were present in rather large numbers during the pre-square stage of the plant. Scattered showers throughout these portions of the State made conditions favorable for weevil multiplication during the season and considerable injury resulted. Hot dry weather held weevils in check during the season in the central and western portion of the State.

COTTON APHID (Arhis gossypii Glover)

Georgia O. I. Snapp (October 13): Very heavy infestation on cotton plants in locality of Fort Valley at the present time.

Louisiana B. R. Coad: The cotton louse has been unusually abundant throughout the belt; however, only a few cases of serious injury have been reported.

COTTON LEAF WORM (Alabama argillacea Hbn.)

GENERAL
STATEMENT

B. R. Coad: The leaf worm was generally distributed throughout New Mexico, Texas, Oklahoma, Arkansas, Louisiana, Tennessee, Mississippi, and Alabama. In Texas the cotton was stripped generally from central Texas south. In Oklahoma in local areas considerable injury was reported. Very little damage was reported in Arkansas. In Louisiana, defoliation is almost complete throughout the State. In northern Louisiana the first worms appeared during the last week in July. Since their appearance there have been three generations of moths. In the extreme western portion of Tennessee some injury was reported with a light infestation in other portions of the State. In Mississippi defoliation with considerable injury occurred in many areas of the State. In Alabama spotted infestations with no injury reported have occurred throughout the State.

Illinois W. P. Flint (October 19): Adults of this moth appeared in central Illinois later than usual. A moderate infestation exists in southern Illinois cotton fields, according to S. C. Chandler, but little, if any, damage to the cotton will occur as the infestation developed too late, most of the crop having been picked.

Texas E. W. Laake (October 20): Only one field was observed in the immediate vicinity of Dallas that was not partly or entirely defoliated by the leaf worm.

Arizona Arizona News Letter, Vol. 3, No. 9 (September 30): The following was reported by the district inspector from Safford and vicinity: "The cotton leaf worm has distributed itself well over the entire valley. This is considered good, as much of the cotton is rank and the defoliation is aiding in the maturing of the late cotton."

BOLL WORM (Heliothis obsoleta Fab.)

Texas E. W. Kaake (October 29): Recent counts made in local fields and markets of late field corn show 100 per cent infestation. Many of the ears are damaged to such an extent that they are unmarketable for roasting ears.

California White C. Barber (August 21): This insect is working on 90 acres of cotton in Kern County and the damage is less than one-half of 1 per cent so far.

F. R. Braun (September 23): Attacked young bolls last week in August; older bolls throughout September. Apparently all pupating by October 1.

T. D. Urbahns (September 27): The boll worm is proving to be a cotton pest in new cotton districts of the Sacramento Valley.

BROWN COTTON BUG (Euschistus servus Say)

Arizona Arizona News Letter, Vol. 3, No. 9 (September 30): The following was reported by the district inspector from Safford and vicinity. "The brown cotton bug was found in a field near Safford. By an actual count of a number of plants it was found that more than 50 per cent of the bolls had failed to mature properly."

A HYMENOPTEROUS PARASITE (Apanteles bucculatricis Mues.)

California A. W. Morrill (September 19): I am sending a hymenopterous parasite bred from Bucculatrix thurberiella pupa, the larva having been collected on cotton at Hermosillo, Sonora. I am perhaps assuming too much in saying that this was bred from a pupa. The larva spun up and the parasite appeared from the cocoon.

COTTON LEAF PERFORATER (Bucculatrix thurberiella Busck)

California and Mexico T. D. Urbahns (September 19): H. H. Clark, Manager of the Colorado River Land Co., Mexicali, Mex., reports serious losses to their cotton crops in Mexico and California by this species.

COTTON RED SPIDER (Tetranychus telarius L.)

GENERAL
STATEMENT

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B. R. Coad: An outbreak of red spider occurred during the latter part of June and the first fifteen days of July in Arkansas, Georgia, eastern South Carolina and eastern North Carolina, disappearing, however, during the latter part of July.

COTTON FLEA (Psallus seriatus Reut.)

GENERAL
STATEMENT

B. R. Coad: The hopper has been reported on cotton in central and southern Texas, throughout Louisiana, northern portions of Mississippi, throughout Georgia and South Carolina. However, the injury has been light at practically all points and even in south Texas was considerably lighter than in 1924.

F O R E S T A N D S H A D E - T R E E I N S E C T S

BOXELDER

BOXELDER PLANT BUG (Leptocoris trivittatus Say)

- Indiana J. J. Davis (October 23): Continue to receive reports of great abundance from all parts of the State.
- Iowa C. N. Ainslie (October 16): This pest has been gradually increasing in numbers for several years and is a real nuisance this fall on account of its great numbers and its efforts to swarm into houses for warmth.
- Nebraska M. H. Swenk (September 25-October 25): The boxelder plant bug has been about normally abundant and annoying during the period covered by this report.

HACKBERRY

HACKBERRY NIPPLE GALL (Pachypsylla celtidis mamma Riley)

- Nebraska M. H. Swenk (September 25-October 25): Conspicuous deformation of hackberry leaves by the psyllid Pachypsylla celtidis-mamma was reported during the first half of October from localities in Nuckolls, Hall, and Dawes Counties.

A SCALE (Lecanodiaspis celtidis Ckll.)

- Nebraska M. H. Swenk (September 25-October 25): A heavy infestation of hackberry trees in Grand Island, Hall County, with the scale insect Lecanodiaspis celtidis was reported about the middle of September.

OAK

AN OAK CATERPILLAR (Species undetermined)

- Texas E. W. Laake (September 30): A 400-acre post oak grove in the Pleasant Grove community, Dallas County, was completely defoliated by lepidopterous larvae, apparently a species of Datana. A few scattered elm and locust trees, in the grove remained untouched.

PINE

PINE LEAF SCALE (Chionaspis pinifoliae Fitch)

Ohio E. W. Mendenhall (October 14): The pine leaf scale is quite bad in different localities in Dayton. Nicotine sulphate spray seems to be effective and soap solution is good.

CATALPA

CATALPA SPHINX (Caratomia catalpa Boisd.)

Indiana J. J. Davis (October 23): Catalpa worms not so abundant as usual but a few reports from southern Indiana.

COTTONWOOD

COTTONWOOD LEAF MINER (Euglyphis scutellaris Suff.)

Arizona Arizona News Letter Vol. 3, No. 9 (September 30): The cottonwood leaf miner has caused a heavy shedding of the leaves of the cottonwoods throughout the Salt River Valley. The larvae of this insect become very annoying because they suspend themselves from the trees on long silk-like threads. A number of inquiries were received concerning this insect.

COTTONWOOD SCALE (Chionaspis ortholobis Comst.)

Nebraska M. H. Swenk (September 25-October 25): From Holt County during the first week in October came the report of the killing of some valued willow trees by the cottonwood scale.

ELM

ELM SCURFY SCALE (Chionaspis americana Johns.)

Indiana J. J. Davis (October 28): Elm scurfy scale destructive to young elms at Lafayette and other places in central Indiana.

WALNUT

RED-HUMPED CATERPILLAR (Schizura concinna S. & A.)

California T. A. Willis (September 25): On black and English walnuts in Colusa County.

T. D. Uroshns (September 30): This species has been unusually abundant during the month of September at Gridley on English walnut. Apparently it is the third generation for the season.

WALNUT CURCULIO (Conotrachelus juglandis Lec.)

Nebraska M. H. Swenk (September 25-October 25): A heavy infestation of the walnuts with the walnut curculio was reported early in October from Platte County.

MAPLE

BAGWORM (Thyridouryx erlemannaeformis Haw.)

Indiana

J. J. Davis (October 23): Bagworms abundant as usual in the southern third of the State attacking maple, pecan, and conifers.

INSECTS ATTACKING GREENHOUSE

AND ORNAMENTAL PLANTS

MISCELLANEOUS FEEDERS

STRAWBERRY FLEA BEETLE (Haltica ignita Ill.)

Maryland

E. N. Cory (September 26): A new insect to this range of greenhouses. Severely injuring stock and cuttings of Fuchsia and Cuphea under glass at White Marsh.

RED SPIDER (Tetranychus bimaculatus Harv.)

Nebraska

M. H. Swenk (September 25-October 25): Complaints of injury by the red spider continued up through the first week in October.

ROSE

ROSE WEDGE (Dasynessa rhodophaga Coq.)

Illinois

W. P. Flint (October 19): Several cases of damage by this insect have come to notice during the past few weeks.

A FLAT-HEADED BORER (Agilus viridis var. fagi Ratz.)

Connecticut

W. E. Britten (October 15): Characteristic swellings on twigs, at Norwalk. Adults have not been reared. Norwalk joins Darien, whence it was reported on Rosa rugosa last month.

INSECTS ATTACKING MAN AND

DOMESTIC ANIMALS

MAN

YELLOW-FEVER MOSQUITO (Aedes aegypti L.)

Texas

E. W. Laake (October 20): Several reports of annoyance by the dengue-fever mosquitoes have come to this office during the past month; however, this insect has not been so abundant this fall as usual. Three cases of dengue fever, two of these during the last week of September and one this month, have been reported by the Dallas Health Department.

CATTLE

HORN FLY (*Haematobia irritans* L.)

- Texas D. C. Parman (August 26): The horn fly is increasing some in the Dry Frio Canyon; occasionally there are as many as 50 on some animals. (September 17): The horn fly has increased to a good extent in the mountains, there being from 25 to 250 on most animals. At Uvalde there has been some increase, but the flies are not noticeable, there being rarely more than 10 to 15 on any animal.
- Tennessee D. C. Parman (October 5): The horn fly at Franklin, Nashville, and Clarksville is not nearly so annoying to cattle as it usually is. It is rare to see more than 100 adults on any animal except in the river bottoms, where as many as 500 are sometimes observed.
- Texas E. W. Laake (October 20): Horn flies have not seriously annoyed cattle the latter part of this summer and, although there has been some increase in numbers during the last month, the average number per animal at dairies in the vicinity of Dallas is not over 50 to 75, and apparently many less on animals not so closely confined.

STABLE FLY (*Stomoxys calcitrans* L.)

- Tennessee D. C. Parman (October 5): The stable fly is very rarely observed, but quite a heavy infestation was observed in the Cumberland River bottoms near Ashland City, there being as many as 25 on some animals.
- Texas E. W. Laake (October 20): Stable flies have been rather scarce during the hot, dry summer. Although weather conditions were very favorable for their development during the past month, they have increased very little. This is due to the fact that oat and wheat straw stacks, their usual breeding places, are absent in this vicinity on account of an almost total failure of these crops this year.

CANYON HORSE FLY (*Tabanus rubescens* Bellardi)

- Texas D. C. Parman (August 26): More tabanids were observed on stock in the Dry Frio canyon today than have been observed during the season; none to 10 on cattle and horses. (September 17): The canyon horse fly was rarely observed today in the Dry Frio Canyon.

SCREW WORM (*Cochliomyia macellaria* Fab.)

- Texas D. C. Parman (August 26): Very rare to find new cases at this date. (September 17): Screw worm cases have increased some in the Dry Frio Canyon. The general infestations are about 1 per cent. One flock of goats that were sheared about 10 days ago have had as high as 17 per cent worm cases.

E. W. Laake (October 5): The screw-worm fly is very abundant about local packing houses. At least 60 per cent of all flies present consist of this species.

CATTLE GRUB (Hypoderma lineatum DeVill.)

Texas

E. W. Laake (October 15): A considerable number of third-stage and a few young to half-grown fourth-stage larvae were found today in the backs of local dairy cows. The number of grubs up under the skin of the backs of cattle at this date is probably much heavier than in the average season.

BLACK BLOW FLY (Phormia regina Meig.)

Texas

E. W. Laake (September 20): The black blow fly has been taken in traps at a local packing house during the past week. There are very few present, however. This species nearly always disappears during the summer months but as soon as the cooler weather sets in it appears again very promptly and increases very rapidly during the late fall.

POULTRY

STICKTIGHT FLEA (Holodacnusa gallinacea West.)

Texas

D. C. Parman (September 1): The heavy infestations of the sticktight flea decreased during the long, hot summer but there are still some losses from this pest. A ranch was visited today where the flea is more abundant than it has been during the season, and there has been a loss of 14 hens during the last ten days from a flock of about 150. The loss of young stock has been approximately 50 per cent. All of the chickens are heavily infested and are in bad condition.

POUL TICK (Argas miniatus Koch)

Texas

D. C. Parman (September 17): The chicken tick has been noticeably abundant and losses have been had from death in many flocks, but the average of infestations is lower than normal and the infestations are lighter than usual.

INSECTS INFESTING HOUSES AND PREMISES

TERMITES

Indiana

J. J. Davis (October 28): Continue to receive reports from southern Indiana of damage to buildings by termites. Several serious infestations have been observed at Lafayette.

Texas

E. W. Laake (October 11): Over 30 reports of termite annoyance and injury to buildings in Dallas have been received at this office since last spring. In nearly every case injury to wall

paper and woodwork was reported. In a few instances considerable damage was done to the woodwork, necessitating the rebuilding and repapering of several rooms in one dwelling and the relaying of hardwood floors in another dwelling.

CIGARETTE BEETLE (Lasioderma serricorne Fab.)

Illinois W. P. Flint (October 13): Several additional cases of injury by this insect to silk-upholstered furniture have been reported during the last two months.

POWDER-POST BEETLES (Bostrichidae)

Nebraska M. H. Swenk (September 25-October 25): Another complaint of serious injury by powder-post beetles to a barn in which all of the dimension timbers and framework are of cottonwood lumber was received from Holt County during the third week in October.

INSECTS INJURIOUS TO STORED PRODUCTS

BEAN WEEVIL (Meloboris obtectus Say)

Nebraska M. H. Swenk (September 25-October 25): Stored-grain pests have been normally, or possibly subnormally, abundant and injurious this fall. There have been numerous complaints of the infestation of stored beans with the bean weevil during the month of October.

WEEVILS

Kansas J. W. McCulloch (October 23): A good many reports are being received regarding stored-grain insects. Weevils seem to be the predominating species.

INDIAN-MEAL MOTH (Plodia interpunctella Hbn.)

Kansas J. W. McCulloch (October 23): A seed house near Manhattan had a rather heavy infestation of the Indian-meal moth.

CADALLE (Tenebrionides mauritanicus L.)

Kansas J. W. McCulloch (October 23): A good many reports are being received regarding stored-grain insects. The cadalle seems to be the predominating species.

HERMETIA ILLUCENS L.

Virginia E. J. Henderson (October 3): These insects were found in cucumber pickles about the middle of September at Churchland. The pickles were in barrels in a small storage room. They were doing considerable damage to the cucumbers.

